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REMARKS

In the Office Action of September 13, 2006, claims 1-5, 7, 8, 10-14, 17-21, 24-26 and 29-38 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Doi et al. (US 2004/0009738A1). Claims 1-5, 7, 8, 10-14, 17, 18, 24-26 and 29-38 were also rejected under 35 U.S.C. §102(e) as allegedly being anticipated by White et al. (US 6,626,744). Claims 1-3 were also rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Jeong (US 6,942,545). Claims 1-8 were also rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Yamashita (US 5,924,916). Furthermore, claims 6, 9, 15, 16, 22, 23, 27 and 28 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Doi et al. in view of Bowman et al. (US 6,309,279).

In response, Applicant has amended the specification and the claims to correct minor errors. With respect to the specification, paragraphs [0013], [00110], [00116], [00131], [00143], [00158], [00159], [00167], [00180], [00181], [00193], [00211], [00225], [00231] and [00242] have been amended. With respect to the claims, claims 16, 24, 30, 34, 35 and 36 have been amended. Claim 38 has been canceled since it is a duplicate of claim 37. In addition, Applicant submits a replacement sheet of drawings for Fig. 32 to correct minor errors. Specifically, the text in block 3330 of Fig. 32 has been amended to replace "the first load/unload cup" with "the second load/unload cup", and the text in block 3335 has been amended to replace "the wafer relay device" with "the dual cup wafer relay device."

With respect to the claim rejections, Applicant has amended claim 24 to more clearly distinguish the claimed invention from the cited references. Applicant respectfully asserts that the amended independent claim 24, as well as the independent claims 1, 10, 17, 29, 30, 33 and 35, are not anticipated by the respective cited references, as explained below. In view of the following remarks, Applicant respectfully requests the allowance of the pending claims 1-37.

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I. Patentability of Independent Claims 1, 10, 17, 24, 29, 30, 33 and 35

The Office Action has rejected the independent claims 1, 10, 17, 24, 29, 30, 33 and 35 under 35 U.S.C. §102(e) as allegedly being anticipated by Doi et al. and White et al. The Office Action has also rejected the independent claim 1 under 35 U.S.C. §102(e) as allegedly being anticipated by Jeong and Yamashita.

In response, Applicant has amended the independent claim 24 to more clearly distinguish the claimed invention from the relevant cited references. Applicant respectfully asserts that the claimed elements of the independent claims 1, 10, 17, 24, 29, 30, 33 and 35 are not anticipated by the respective cited references.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. Thus, if a single element of a claim is not disclosed in a single prior art reference, then the claim cannot be anticipated by that prior art reference.

A. Independent Claims 1, 29, 30 and 35

Each of the independent claims 1, 29, 30 and 35 recites at least one “load-and-unload cup configured to be pivoted...,” which is not disclosed in the cited references of Doi et al., White et al., Jeong and Yamashita.

With respect to the cited reference of Doi et al., the Office Action states on page 2 that this cited reference discloses “loading and unload cups (35 a-b).” However, in paragraph [0033] of the cited reference of Doi et al., the cited elements 35A and 35B are referred to as “dressing devices” that are used “to dress a polishing pad on each of the polishing platens 34A, 34B, 34C.” These “dressing devices” are clearly not equivalent to the claimed “load-and-unload cup,” as recited in claims 1, 29, 30 and 35. Thus, these claims 1, 29, 30 and 35 are not anticipated by the cited reference of Doi et al.

With respect to the cited reference of White et al., the Office Action states on page 3 that this cited reference discloses "loading and unload cups (166&172)." However, in column 3, lines 7-15, of the cited reference of White et al., the cited element 166 is referred to as "a conventional robot" that is "commonly used to transfer substrates of wafers 126 into and out of and one or more wafer cassettes 168." In addition, in column 3, lines 16-17, of the cited reference of White et al., the cited element 172 is referred to as "an edge grip robot." These "robots" are clearly not equivalent to the claimed "*load-and-unload cup*," as recited in claims 1, 29, 30 and 35. In fact, the cited reference of White et al. discloses "load cups 164". However, these load cups 164 of White et al. are not "configured to be pivoted," as recited in claims 1, 29, 30 and 35. Thus, claims 1, 29, 30 and 35 are not anticipated by the cited reference of White et al.

With respect to the cited reference of Jeong, the Office Action states on page 4 that this cited reference discloses "the invention as claimed in claims 1-3" without any reasoning or analysis. The cited reference of Jeong does disclose a wafer load/unload cup unit 1202, as illustrated in Fig. 12. However, this wafer load/unload cup unit 1202 of Jeong is not "configured to be pivoted," as recited in claims 1, 29, 30 and 35. Thus, claims 1, 29, 30 and 35 are not anticipated by the cited reference of Jeong.

With respect to the cited reference of Yamashita, the Office Action states on page 4 that this cited reference discloses "the invention as claimed in claims 1-8" without any reasoning or analysis. The cited reference of Yamashita discloses transfer apparatus 3a-3c. However, the cited reference of Yamashita does not disclose the claimed "*load-and-unload cup*," as recited in claims 1, 29, 30 and 35. Thus, these claims 1, 29, 30 and 35 are not anticipated by the cited reference of Yamashita.

B. Independent Claim 10

The independent claim 10 recites in part "*pivoting an object to be polished to an object carrier about a pivoting point over a polishing surface*," which is not disclosed in the cited reference of Doi et al. and White et al. The cited reference of Doi et al.

discloses in paragraph [0045] that “[t]he polishing head 38A waits in advance above the relaying position T_A, and the wafer W is passed to the polishing head 38A from the loading table.” Thus, the cited reference of Doi et al. does not disclose “*pivoting an object to be polished to an object carrier about a pivoting point over a polishing surface*,” as recited in claim 10. The cited reference of White et al. discloses in column 3, lines 28-31 that “the shuttle 162 transfers the unpolished wafer 126 from the load cup 164 to the drive system 104.” The drive system 104 includes polishing heads 124 and 125. As illustrated in Fig. 1, the movement of the shuttle 162 to the drive system 104 is linear. Thus, the cited reference of White does not disclose “*pivoting an object to be polished to an object carrier about a pivoting point over a polishing surface*,” as recited in claim 10. Consequently, claim 10 is not anticipated by the cited references of Doi et al. and White et al.

C. Independent Claim 17

The independent claim 17 recites in part “*a load-and-unload cup configured to be moved between said first and second object carriers to transfer one of said first and second objects to one of said first and second object carriers*,” which is not disclosed in the cited reference of Doi et al. and White et al. As explained above in Section A, the cited reference of Doi et al. discloses “dressing devices” 35A and 35B, which are not equivalent to the claimed “*load-and-unload cup*,” as recited in claim 1. Thus, the cited reference of Doi et al. does not disclose “*a load-and-unload cup*,” as recited in claim 17. The cited reference of White et al. does disclose “load cups 164”. However, these load cups 164 of White et al. are not “*configured to be moved between said first and second object carriers*,” as recited in claim 17. Thus, the cited reference of Doi et al. does not disclose “*a load-and-unload cup*,” as recited in claim 17. Consequently, claim 17 is not anticipated by the cited references of Doi et al. and White et al.

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D. Independent Claim 24

As amended, the independent claim 24 recites in part *"moving said load-and-unload cup to a first object carrier, including pivoting said load-and-unload cup,"* which is not disclosed in the cited reference of Doi et al. and White et al. As explained above in Section A, the cited reference of Doi et al. discloses "dressing devices" 35A and 35B, which are not equivalent to the claimed *"load-and-unload cup,"* as recited in claim 24. The cited reference of Doi et al. does not mention any pivoting motion. Thus, the cited reference of Doi et al. does not disclose *"moving said load-and-unload cup to a first object carrier, including pivoting said load-and-unload cup,"* as recited in claim 24. The cited reference of White et al. does disclose "load cups 164". However, these load cups 164 of White et al. do not pivot. Thus, the cited reference of Doi et al. does not disclose *"moving said load-and-unload cup to a first object carrier, including pivoting said load-and-unload cup,"* as recited in claim 24. Consequently, claim 24 is not anticipated by the cited references of Doi et al. and White et al.

E. Independent Claim 33

The independent claim 33 recites in part *"pivoting a first object to be polished to a first object carrier positioned over a polishing surface and a second object to be polished to a second object carrier positioned over said polishing surface,"* which is not disclosed in the cited reference of Doi et al. and White et al. The cited reference of Doi et al. discloses in paragraph [0045] that "[t]he polishing head 38A waits in advance above the relaying position T_A, and the wafer W is passed to the polishing head 38A from the loading table." The cited reference of Doi et al. does not mention any pivoting motion. Thus, the cited reference of Doi et al. does not disclose *"pivoting a first object to be polished to a first object carrier positioned over a polishing surface and a second object to be polished to a second object carrier positioned over said polishing surface,"* as recited in claim 33. The cited reference of White et al. discloses in column 3, lines 28-31 that "the shuttle 162 transfers the unpolished wafer 126 from the load cup 164 to the drive system 104." The drive system 104 includes polishing heads 124 and 125. As

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illustrated in Fig. 1, the movement of the shuttle 162 to the drive system 104 is linear. Thus, the cited reference of White does not disclose *"pivoting a first object to be polished to a first object carrier positioned over a polishing surface and a second object to be polished to a second object carrier positioned over said polishing surface,"* as recited in claim 33. Consequently, claim 33 is not anticipated by the cited references of Doi et al. and White et al.

Furthermore, the cited references of Doi et al. and White et al. disclose polishing heads that are each positioned over a different polishing surface. Thus, these cited references do not disclose *"a first object carrier positioned over a polishing surface"* and *"a second object carrier positioned over said polishing surface,"* as recited in claim 33. Consequently, claim 33 cannot be anticipated by the cited references of Doi et al. and White et al.

II. Patentability of Dependent Claims 2-9, 11-16, 18-23, 25-28, 31, 32, 34, 36 and 37

Each of the dependent claims 2-9, 11-16, 18-23, 25-28, 31, 32, 34, 36 and 37 depends on one of the independent claims 1, 10, 17, 24, 29, 30, 33 and 35. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicant submits that these dependent claims are allowable for at least the same reasons as their respective base claims.

Applicant respectfully requests reconsideration of the claims in view of the claim amendments and the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

In Kwon Jeong

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